

EMR

EMR, Inc.  
5301 East River Road, Suite 114  
Pridley, MN 55421  
(763) 277-5200  
(763) 277-5201 (fax)

SDMS Document ID



2022810

## Facsimile transmittal

EMR Project Number:

To: Jim Christensen/Courtney Z. Fax: \_\_\_\_\_  
From: Tanya Drake Date: 10/27/04  
Re: \_\_\_\_\_ Pages: 4 (Incl. Cover)  
CC: \_\_\_\_\_

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ For Entry



an Analytica Group Company

October 12, 2004

Ms. Tanya Drake  
EMR Environmental Management Resources, Inc.  
5301 E. River Road, Suite 114  
Fridley, MN 55421-

Analytica Solutions, Inc.  
12189 Pennsylvania Street  
Thornton, Colorado 80241  
(303) 469-8868  
(800) 873-8707  
Fax: (303) 469-5254

Re: LGN 349211 Project: BNSF Libby Rail Yard, Libby, MT

Dear Ms. Tanya Drake:

The bulk samples recently submitted to our laboratory have been analyzed by polarized light microscopy (PLM), the EPA-recommended method for identification of fibrous constituents in building materials. The results of these analyses are summarized in the enclosed table. Also enclosed is a copy of documentation submitted with your samples.

If you have any technical questions concerning these analyses, please feel free to call me. All other calls should be directed to our Customer Service Representatives.

Sincerely,

Jeff Lyons  
President

Enclosures



Analytica Solutions, Inc.  
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**RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS BY  
POLARIZED LIGHT MICROSCOPY (PLM)**

Client: EMR Environmental Management Resources, Inc.

LGN: 349211

Project ID: BNSF Libby Rail Yard, Libby, MT

Page: 1 of 8

**Sample Description:**

<u>Sample Number</u>	<u>Sample Date</u>	<u>Description</u>
TD-1	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-2	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-3	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-4	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-5	10/06/2004	RR tie core shavings 3/4" diam. [brown]

**Results of PLM Analysis: Visual Area Estimation: Percentages Detected**

Sample Number:	TD-1	TD-2	TD-3	TD-4	TD-5
Asbestiform Minerals:					
Amosite					
Anthophyllite					
Chrysotile					
Crocidolite					
Tremolite-Actinolite					
TOTAL ASBESTOS	0	0	0	0	0
Other Fibrous Materials:					
Fibrous Glass					
Cellulose	95.0	85.0	90.0	90.0	85.0
Synthetics					
Other:					
Percent Nonfibrous Material	5.0	15.0	10.0	10.0	15.0

Analyst:

Douglas Kent

Date: 10/11/2004



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POLARIZED LIGHT MICROSCOPY (PLM)**

Client: EMR Environmental Management Resources, Inc.

LGN: 349211

Project ID: BNSF Libby Rail Yard, Libby, MT

Page: 2 of 8

**Sample Description:**

<u>Sample Number</u>	<u>Sample Date</u>	<u>Description</u>
TD-6	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-7	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-8	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-9	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-10	10/06/2004	RR tie core shavings 3/4" diam. [brown]

**Results of PLM Analysis: Visual Area Estimation: Percentages Detected**

Sample Number:	TD-6	TD-7	TD-8	TD-9	TD-10
Asbestiform Minerals:					
Amosite					
Anthophyllite					
Chrysotile					
Crocidolite					
Tremolite-Actinolite					
TOTAL ASBESTOS	0	0	0	0	0
Other Fibrous Materials:					
Fibrous Glass					
Cellulose	90.0	75.0	95.0	90.0	85.0
Synthetics					
Other:					
Percent Nonfibrous Material	10.0	25.0	5.0	10.0	15.0

Analyst:

Douglas Kent

Date: 10/11/2004



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POLARIZED LIGHT MICROSCOPY (PLM)**

Client: EMR Environmental Management Resources, Inc.

LGN: 349211

Project ID: BNSF Libby Rail Yard, Libby, MT

Page: 3 of 8

**Sample Description:**

<u>Sample Number</u>	<u>Sample Date</u>	<u>Description</u>
TD-11	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-12	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-13	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-14	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-15	10/06/2004	RR tie core shavings 3/4" diam. [brown]

**Results of PLM Analysis: Visual Area Estimation: Percentages Detected**

Sample Number:	TD-11	TD-12	TD-13	TD-14	TD-15
Asbestiform Minerals:					
Amosite					
Anthophyllite					
Chrysotile					
Crocidolite					
Tremolite-Actinolite					
TOTAL ASBESTOS	0	0	0	0	0
Other Fibrous Materials:					
Fibrous Glass					
Cellulose	90.0	85.0	80.0	85.0	75.0
Synthetics					
Other:					
Percent Nonfibrous Material	10.0	15.0	20.0	15.0	25.0

Analyst:

Douglas Kent

Date: 10/11/2004



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POLARIZED LIGHT MICROSCOPY (PLM)**

Client: EMR Environmental Management Resources, Inc.

LGN: 349211

Project ID: BNSF Libby Rail Yard, Libby, MT

Page: 4 of 8

**Sample Description:**

<u>Sample Number</u>	<u>Sample Date</u>	<u>Description</u>
TD-16	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-17	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-18	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-19	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-20	10/06/2004	RR tie core shavings 3/4" diam. [brown]

**Results of PLM Analysis: Visual Area Estimation: Percentages Detected**

Sample Number:	TD-16	TD-17	TD-18	TD-19	TD-20
Asbestiform Minerals:					
Amosite					
Anthophyllite					
Chrysotile					
Crocidolite					
Tremolite-Actinolite					
TOTAL ASBESTOS	0	0	0	0	0
Other Fibrous Materials:					
Fibrous Glass					
Cellulose	80.0	75.0	90.0	75.0	85.0
Synthetics					
Other:					
Percent Nonfibrous Material	20.0	25.0	10.0	25.0	15.0

Analyst:

Douglas Kent

Date: 10/11/2004



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POLARIZED LIGHT MICROSCOPY (PLM)**

Client: EMR Environmental Management Resources, Inc.

LGN: 349211

Project ID: BNSF Libby Rail Yard, Libby, MT

Page: 5 of 8

**Sample Description:**

<u>Sample Number</u>	<u>Sample Date</u>	<u>Description</u>
TD-21	10/06/2004	RR tie core shavings 3/4" diam. [dark brown]
TD-22	10/06/2004	RR tie core shavings 3/4" diam. [light tan]
TD-23	10/06/2004	RR tie core shavings 3/4" diam. [dark brown]
TD-24	10/06/2004	RR tie core shavings 3/4" diam. [dark brown]
TD-25	10/06/2004	RR tie core shavings 3/4" diam. [light tan]

**Results of PLM Analysis: Visual Area Estimation: Percentages Detected**

Sample Number:	TD-21	TD-22	TD-23	TD-24	TD-25
Asbestiform Minerals:					
Amosite					
Anthophyllite					
Chrysotile					
Crocidolite					
Tremolite-Actinolite					
TOTAL ASBESTOS	0	0	0	0	0
Other Fibrous Materials:					
Fibrous Glass					
Cellulose	75.0	80.0	75.0	75.0	75.0
Synthetics					Trace <1%
Other:	Trace <1%				
Hair					
Percent Nonfibrous Material	24.9	20.0	25.0	25.0	24.9

Analyst:

Michael K. Scales

Date: 10/11/2004



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POLARIZED LIGHT MICROSCOPY (PLM)**

Client: EMR Environmental Management Resources, Inc.

LGN: 349211

Project ID: BNSF Libby Rail Yard, Libby, MT

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**Sample Description:**

<u>Sample Number</u>	<u>Sample Date</u>	<u>Description</u>
TD-26	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-27	10/06/2004	RR tie core shavings 3/4" diam. [gray]
TD-28	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-29	10/06/2004	RR tie core shavings 3/4" diam. [light tan]
TD-30	10/06/2004	RR tie core shavings 3/4" diam. [brown]

**Results of PLM Analysis: Visual Area Estimation: Percentages Detected**

Sample Number:	TD-26	TD-27	TD-28	TD-29	TD-30
Asbestiform Minerals:					
Amosite					
Anthophyllite					
Chrysotile					
Crocidolite					
Tremolite-Actinolite					
TOTAL ASBESTOS	0	0	0	0	0
Other Fibrous Materials:					
Fibrous Glass					
Cellulose	75.0	75.0	80.0	75.0	60.0
Synthetics					
Other:					
Percent Nonfibrous Material	25.0	25.0	20.0	25.0	40.0

Analyst:

*Michael K. Scales*  
Michael K. Scales

Date: 10/11/2004





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**RESULTS OF BULK ASBESTOS SAMPLE ANALYSIS BY  
POLARIZED LIGHT MICROSCOPY (PLM)**

Client: EMR Environmental Management Resources, Inc.

LGN: 349211

Project ID: BNSF Libby Rail Yard, Libby, MT

Page: 7 of 8

**Sample Description:**

<u>Sample Number</u>	<u>Sample Date</u>	<u>Description</u>
TD-31	10/06/2004	RR tie core shavings 3/4" diam. [light tan/dark brown]
TD-32	10/06/2004	RR tie core shavings 3/4" diam. [dark brown]
TD-33	10/06/2004	RR tie core shavings 3/4" diam. [brown]
TD-34	10/06/2004	RR tie core shavings 3/4" diam. [tan]
TD-35	10/06/2004	RR tie core shavings 3/4" diam. [tan/brown]

**Results of PLM Analysis: Visual Area Estimation: Percentages Detected**

Sample Number:	TD-31	TD-32	TD-33	TD-34	TD-35
Asbestiform Minerals:					
Amosite					
Anthophyllite					
Chrysotile					
Crocidolite					
Tremolite-Actinolite					
TOTAL ASBESTOS	0	0	0	0	0
Other Fibrous Materials:					
Fibrous Glass					
Cellulose	75.0	75.0	70.0	75.0	75.0
Synthetics		Trace <1%			
Other:					
Percent Nonfibrous Material	25.0	24.9	30.0	25.0	25.0

Analyst:

Michael K. Scales

Date: 10/11/2004



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Client: EMR Environmental Management Resources, Inc.

LGN: 349211

Project ID: BNSF Libby Rail Yard, Libby, MT

Page: 8 of 8

**Sample Description:**

<u>Sample Number</u>	<u>Sample Date</u>	<u>Description</u>
TD-36	10/06/2004	RR tie core shavings 3/4" diam. [tan/brown]
TD-37	10/06/2004	RR tie core shavings 3/4" diam. [tan]
TD-38	10/06/2004	RR tie core shavings 3/4" diam. [tan/brown]
TD-39	10/06/2004	RR tie core shavings 3/4" diam. [blackish brown]
TD-40	10/06/2004	RR tie core shavings 3/4" diam. [dark brown/tan]

**Results of PLM Analysis: Visual Area Estimation: Percentages Detected**

Sample Number:	TD-36	TD-37	TD-38	TD-39	TD-40
Asbestiform Minerals:					
Amosite					
Anthophyllite					
Chrysotile					
Crocidolite					
Tremolite-Actinolite					
TOTAL ASBESTOS	0	0	0	0	0
Other Fibrous Materials:					
Fibrous Glass					
Cellulose	75.0	75.0	75.0	75.0	75.0
Synthetics					
Other:					
Percent Nonfibrous Material	25.0	25.0	25.0	25.0	25.0

Analyst:

Michael K. Scales

Date: 10/11/2004

10/06/2004 13:42 4288697820

EMR RETURNED



# **BULK ASBESTOS SAMPLE DATA SHEET**

12189 PENNSYLVANIA  
THORNTON, CO 80241  
(303) 469-8888  
(800) 873-8707  
FAX: (303) 469-5254

LGN: 349211

Company: EMR INC.  
Contact: TANYA DRAKE  
Address: 5301 E. RIVER ROAD  
SUITE 114  
City: FRIDLEY  
State: MIN Zip: 55421  
Phone: (763) 277-5200  
Fax: (763) 277-5201  
Email: ( )

Project: BNSF L1561 RAIL YARD  
L1561 MT

Purchase Order: 5537-004

Turnaround: Business Days

- ☐ Same Day ☐ 3rd Day  
☐ Next Day ☐ 5th Day  
☒ 2nd Day

SAMPLE NUMBER	DATE	SAMPLE DESCRIPTION
✓ TD-1	10-2-04	RR TIE CORE SHAVINGS 3/4" DIAM
✓ TD-2		
✓ TD-3		
✓ TD-4		
✓ TD-5		
✓ TD-6		
✓ TD-7		
✓ TD-8		
✓ TD-9		
✓ TD-10		
✓ TD-11		
✓ TD-12		
✓ TD-13		
✓ TD-14		
✓ TD-15		

Special Instructions or Other Information: RECOMMEND OPENING Z-BAGS UNDER VENTILATED HOOD BECAUSE OF CREOSOTE ODOR.

Relinquished by: [Signature] 10-7-04  
Date/Time

Received by: [Signature] 10/18/04 13:05  
Date/Time

Relinquished by: \_\_\_\_\_  
Date/Time

Received by: \_\_\_\_\_  
Date/Time

Samples will be disposed of after six months unless indicated below.

Return Samples: ☒  
057.0496

PAGE 1 OF 3



# BULK ASBESTOS SAMPLE DATA SHEET

12189 PENNSYLVANIA  
THORNTON, CO 80241  
(303) 469-8868  
(800) 873-8707  
FAX: (303) 469-5254

LGN: 349211

Company: \_\_\_\_\_  
Contact: \_\_\_\_\_  
Address: SEE PAGE  
City: \_\_\_\_\_  
State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: (\_\_\_\_) \_\_\_\_\_  
Fax: (\_\_\_\_) \_\_\_\_\_  
Email: (\_\_\_\_) \_\_\_\_\_

Project: BASE LIBBY RAILYARD  
LIBBY, MT  
Purchase Order: # 5537-004

Turnaround: Business Days

- ☐ Same Day ☐ 3rd Day  
☐ Next Day ☐ 5th Day  
☒ 2nd Day

SAMPLE NUMBER	DATE	SAMPLE DESCRIPTION
TD-16	10-6-04	RR TIE CORE SHAVINGS 3/4" DIAM
TD-17		
TD-18		
TD-19		
TD-20		
TD-21		
TD-22		
TD-23		
TD-24		
TD-25		
TD-26		
TD-27		
TD-28		
TD-29		
TD-30		

Special Instructions or Other Information: RECOMMEND OPENING Z-BAGS UNDER VENTILATED HOOD BECAUSE OF CRYSTAL DUST

Relinquished by: [Signature] <sup>10-7-04</sup> 0900 Received by: [Signature] <sup>10/8/04</sup> 1300  
Date/Time Date/Time  
Relinquished by: \_\_\_\_\_ Received by: \_\_\_\_\_  
Date/Time Date/Time

Samples will be disposed of after six months unless indicated below.  
Return Samples: ☒  
057.0496



## ANALYTICA SOLUTIONS

12189 Pennsylvania Street  
Thornton, Colorado 80241

### POLARIZED LIGHT MICROSCOPY (PLM) BULK SAMPLE ANALYSIS PROCEDURES

Bulk samples of construction materials are analyzed by a professional mineralogist with a minimum of a Bachelor's Degree in Geology using the July 1993, EPA Test Method, (EPA/600/R-93/116), "Method for the Determination of Asbestos in Bulk Building Materials"<sup>(1)</sup>. Samples are prepared and analyzed in different Cargille® certified refractive index oils. Estimates of asbestos content are based on visual comparisons using a calibrated graticule. Additional tests and treatments (see below) may also be required for certain samples.

Analytica is accredited by the National Institute of Standards and Technology (Lab Code #101086) under the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos analysis. Analytica participates in the NVLAP bulk asbestos proficiency testing program (*results available upon request*). An in-house QA/QC program is maintained on a daily basis that requires, at a minimum, 10% of samples submitted to be re-analyzed and logged into a quality control tracking system. Analytica participates in two round robin QA/QC programs annually with accredited laboratories throughout the United States. Unused portions of samples are archived for six months, then disposed of or returned to the client.

#### ASHING

Ashing is a procedure in which one half of the sample is placed in a crucible and then set in a furnace at 500° C for one hour or more. Most non-silicate interferants are eliminated, leaving only asbestos undisturbed. The amount of ashed material is compared to the original amount to determine the volume percent lost due to ashing. The sample is then analyzed by PLM for the type and amount of asbestos present. The results shown on the final report are the percentage of asbestos in the original material, not the ashed material, i.e. If 50% of the original material is lost due to ashing and the ashed sample contains 10% asbestos, then the final report would show 5% asbestos in the original material.

#### POINT COUNTING

As of November 20, 1990, the National Emission Standards for Hazardous Air Pollutants (NESHAP) established rules requiring that friable ACM bulk samples with less than 10% asbestos be analyzed by the point count procedures described in the EPA-600/R-93/116 test method. Analytica does have experienced analysts to perform point counts if needed. Analytica Solutions, Inc. cannot determine bulk sample friability and cannot assume responsibility for client compliance with the NESHAP rule.

- (1) In January 1994, a NESHAP clarification was issued regarding analysis of multi-layered samples. This clarification requires all layers of a sample must be analyzed and reported separately. On August 1, 1994, EPA issued a notice of advisory adopting a new AHERA policy consistent with the NESHAP policy. When reviewing an Analytica Solutions PLM analysis report, do not use the composite result for the determination of positive (> 1%) ACM. Determination of ACM should be made strictly from the individual layers of each sample.
- (2) On August 10, 1994, OSHA ruled that to demonstrate that Potential Asbestos Containing Material (PACM) does not contain asbestos, tests shall include analysis of 3 bulk samples of each homogeneous area of the PACM collected in a randomly distributed manner.
- (3) This test report relates only to items tested.
- (4) NVLAP policy requires that this report may not be reproduced except in full, without the written approval of the laboratory.
- (5) NVLAP policy requires that this report must not be used by the client to claim product endorsement by NVLAP or any agency of the United States Government.